

Beach Rehabilitation and Monitoring at Marine Park, Bellingham: Recreating an Urban Beach in Bay-Wide Habitat Restoration Context

Jim Johannessen, Coastal Geologic Services*

Mike Stoner, Port of Bellingham

Shannon Kinsella, Reid Middleton

Peter Hummel, Anchor Environmental

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Marine Park is a heavily used shoreline park in the Fairhaven district of Bellingham, Washington, where water access is very limited. The park shoreline was filled and armored with an un-designed rubble revetment that abuts a saltwater lagoon with eelgrass and other habitats. The Marine Park beach rehabilitation project was completed as part of a larger Bellingham Bay wide habitat restoration effort with emphasis on connecting remaining habitat areas and recreating beaches, including the Waterfront Futures Group and the Bellingham Bay Pilot Project. A design team was assembled in 2001-2002 to remove the failing revetment and replace it with a gravel beach. The gravel beach design resembled conditions found at existing gravel beaches in the general area. The beach was constructed in the fall of 2004. Approximately 1,400 cubic yards of rock, and concrete-asphalt debris and 1,200 cubic yards of fill from the beach were first removed from the site. Seventy tons of creosote piles were removed from the intertidal. Construction was completed well under the total budget amount. The gravel beach extends down to between +2 and +4 ft MLLW and up to a broad sand-covered backshore area. Two drift sills were required in this highly impacted coastal reach, where the coastal railroad line has cut off the naturally limited sediment supply. The initial as-built and physical monitoring results will be presented, including beach stability and the position of beach sediment relative to nearby eelgrass beds.